



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
BIN C15700
Seattle, WA 98115-0070

Refer to:
OSB2001-0198-FEC

October 10, 2001

Nancy H. Weintraub
Senior Environmental Specialist
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Act
Essential Fish Habitat Consultation for the Bridge Replacements on Mill Creek and Little
Creek, Union County, Oregon.

Dear Ms. Weintraub:

Enclosed is a Biological Opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act (ESA) on the proposed bridge replacements on Mill Creek and Little Creek in Union County, Oregon. In this Opinion, NMFS concludes that the proposed action is not likely to jeopardize the continued existence of ESA-listed Snake River (SR) steelhead and SR spring/summer chinook, or destroy or adversely modify designated critical habitat. This Opinion includes reasonable and prudent measures with terms and conditions that are necessary and appropriate to minimize the potential for incidental take associated with this project.

In addition, this Opinion serves to complete consultation on Essential Fish Habitat (EFH) for chinook salmon required by Public Law 104-267, Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Sustainable Fisheries Act of 1996.

If you have any questions regarding this consultation, please contact Catherine Broyles of my staff in the La Grande Field Office, Oregon Habitat Branch, at 541.962.8609.

Sincerely,

Michael R. Crouse

D. Robert Lohn
Regional Administrator



Endangered Species Act - Section 7 Consultation
&
Magnuson-Stevens Act
Essential Fish Habitat Consultation

BIOLOGICAL OPINION

Bridge Replacements on Mill Creek and Little Creek
Grande Ronde River Drainage, Grande Ronde Watershed
Grande Ronde River Basin, Union County, Oregon

Agency: Bonneville Power Administration

Consultation Conducted by: Northwest Region National Marine Fisheries Service

Date Issued: 10/10/01

Refer to: OSB2001-0198-FEC

TABLE OF CONTENTS

1. ENDANGERED SPECIES ACT	1
1.1 Background	1
1.2 Proposed Action	1
1.3 Biological Information and Critical Habitat	3
1.4 Evaluating Proposed Actions	4
1.4.1 Biological Requirements	5
1.4.2 Environmental Baseline	6
1.5 Analysis of Effects	7
1.5.1 Effects of Proposed Action	7
1.5.2 Cumulative Effects	8
1.6 Conclusion	8
1.7 Conservation Recommendations	9
1.8 Reinitiation of Consultation	9
2. INCIDENTAL TAKE STATEMENT	9
2.1 Amount or Extent of Take	10
2.2 Effect of Take	10
2.3 Reasonable and Prudent Measures	10
2.4 Terms and Conditions	11
3. MAGNUSON-STEVENSON ACT	13
3.1 Background	13
3.2 Magnuson-Stevens Fishery Conservation and Management Act	13
3.3 Identification of EFH	14
3.4 Proposed Actions	15
3.5 Effects of Proposed Action	15
3.6 Conclusion	15
3.7 EFH Conservation Recommendations	15
3.8 Statutory Response Requirement	16
3.9 Consultation Renewal	16
4. LITERATURE CITED	16

1. ENDANGERED SPECIES ACT

1.1 Background

The National Marine Fisheries Service (NMFS) received a letter dated August 20, 2001, with an attached biological assessment (BA), from the Bonneville Power Administration (BPA) requesting Endangered Species Act (ESA) section 7 formal consultation regarding the potential effects of bridge replacements on Little Creek, Mill Creek, and Pelican Creek in Union County, Oregon on Snake River (SR) steelhead (*Oncorhynchus mykiss*), SR spring/summer chinook salmon (*Oncorhynchus tshawytscha*), and their designated critical habitat. As the Federal funding agency, BPA is the lead agency for consultation. The Grande Ronde Model Watershed Program (GRMWP) and Union County Public Works (UCPW) are providing partial funding for the project and will oversee implementation.

The BPA has determined that SR steelhead and SR spring/summer chinook may occur within the project area. The SR steelhead were listed as threatened on August 18, 1997 (62 FR43937) and SR spring/summer chinook salmon were listed as threatened on April 22, 1992 (57 FR 14653). Protective regulations for SR steelhead were issued under section 4(d) of the ESA on July 10, 2000 (65 FR 42422). The proposed project is within critical habitat for SR spring/summer chinook, designated on December 28, 1993 (58 FR 68543), and that of SR steelhead, designated on February 16, 2000 (65 FR 7764).

The BPA determined that the proposed bridge replacement on Pelican Creek is not likely to adversely affect (NLAA) SR steelhead or SR spring/summer chinook salmon. This action was already addressed in a separate NMFS letter of concurrence dated September 10, 2001 (OSB2001-0198-IEC). The activities on Mill Creek and Little Creek, however, are deemed likely to adversely affect (LAA) SR steelhead and SR spring/summer chinook salmon and are subject to this Opinion.

This Opinion reflects the results of the consultation process. The consultation process involved a site visit on August 10, 2001, follow up correspondence, and verbal communications to clarify information provided in the BA, and are all included herein as reference. The purpose of this Opinion is to determine whether the actions of replacing the bridges on Mill Creek and Little Creek in Union County are likely to jeopardize the continued existence of SR steelhead, SR chinook, or destroy or adversely modify these species' critical habitat.

1.2 Proposed Action

The BPA is proposing to fund the replacement of structurally deficient bridges on Mill Creek and Little Creek. Mill Creek is a tributary of Catherine Creek which flows into the Grande Ronde River. The proposed bridge replacement site is on the Grande Ronde Valley floor, approximately one half mile from the confluence of Mill Creek and Catherine Creek. The legal description is T.3 S., R.40E. SW¼SE¼ Sec. 18 on Physical Point Road, Union County, Oregon. The second

bridge replacement is on Little Creek which is also a tributary of Catherine Creek. The project site is located at the lower end of High Valley, on Bates Road, approximately 12 miles above the confluence with Catherine Creek. The legal description is T.4S., R.40E. SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 14, Union County, Oregon.

The existing bridge structures range in channel-span from 14 to 17 feet. BPA proposes to replace these two structures with bridges that will span 24 feet. The actual distance between the bridge footings will be approximately 22 feet. Cross sectional area of the channel will be substantially increased (50% more) from the existing bridges, providing a significant increase in flow capacity of the channel. The substructure of the bridges consists of below-grade concrete footings with steel I-beam vertical support up to the level of the existing roadways. The surface of the bridge will consist of a 24'x55' girder topped with steel bridge decking and gravel surfacing. Standard W-beam guard rails with posts approximately every 6' will be installed along the sides of both bridges. Guardrail material is welded to the vertical I-beam structure to contain roadway fill material. Concrete ecoblocks will be placed as wing walls to protect the roadways from undercutting.

Construction is scheduled for the low flow period, mid-August to October 15. The Oregon Department of Fish and Wildlife (ODFW) instream work window for these creeks is from July 1 to October 15. Total construction time is estimated to be 7-8 days at each site. Little and Mill Creeks will have limited live flows (usually less than 2 cfs) during the construction period within the inwater work window. The existing bridges will be lifted from the banks of the project sites with a crane. The crane will be kept out of live water. Sediment traps, catch basins, silt curtains, and coffer dams will be used to keep debris out of the streams where necessary. Proposed construction sequence and time line of activities for the Little Creek and Mill Creek sites are as follows:

- Construct bypass (for Little Creek only) - $\frac{1}{2}$ day.
- Use cranes and other necessary machinery to remove existing bridge - $\frac{1}{2}$ day.
- Push up coffer dams, install silt curtains, excavate footings, form for concrete, place bridge structure, pour concrete - 2 days.
- Curing time - 2 days prior to installation of bridge decking.
- Install upper bridge structure and decking, set ecoblock wing structure and backfill - 2 days.

Bypass roads will not be necessary at the Mill Creek site. The road leading to the bridge will be closed to through traffic during construction. A traffic bypass will be required at the Little Creek site. The bypass will cross Little Creek approximately 75 feet upstream of the existing bridge. A D-6 dozer will be used to push out and level approximately 300 feet of temporary access road on native materials. Where the road enters the riparian influence zone (approximately 75 feet on the west side and 20 feet on the east side) filter fabric will be placed on the ground prior to placing native material for the road surface. Clean washed drain rock will be used for road fill within the

flood-prone zone adjacent to the stream. The channel bed will be excavated slightly to install a 36" culvert at 0% grade. The drain rock will be placed over and around the culvert.

Removal of the bypass installation will include removal of the drain rock, filter fabric and culvert. Ground slope will be re-contoured as closely as possible to original condition. Sedge plugs will be used to revegetate the riparian influence area as needed. Native grass species will be used to seed disturbed upland areas.

A tracked excavator and rubber tired backhoe will be used to excavate for footings. Excavation for footings will be done in isolation from live water and will be done only by equipment located on the side of the channel being excavated. Large boulders along the banks and previously installed riprap under the bridges and adjacent to the live channels on Little and Mill Creeks will serve to isolate water from construction activities. Additional material will be pushed up by a D-6 dozer to reinforce these as necessary to keep water out of the footing excavation. The D-6 dozer will be able to perform its task entirely from the stream bank and will not need to enter the streambed. The coffer dams will not constrict the channels more than the existing width of the live channels and will extend the full width of the bridges plus additional footage on either end to allow for excavation and placement of the wing walls. Sediment curtains will be installed along the coffer dams and up into the upland area on the upstream and downstream ends of the bridge.

Curing concrete for new footings will be isolated from water flowing through the stream channel. Footing excavations will be backfilled on the stream side of the bridge structure with native streambed material and washed drain rock, and native compacted material on the outside. Channel configuration under the bridge will be left as close to natural condition as possible.

1.3 Biological Information and Critical Habitat

The SR steelhead Evolutionarily Significant Unit (ESU) was listed as threatened on August 18, 1997 (62 FR43937). SR spring/summer chinook salmon ESU was listed as threatened on April 22, 1992 (57 FR 14653). Protective regulations for SR steelhead were issued under section 4(d) of the ESA on July 10, 2000 (65 FR 42422). Biological information for SR steelhead is found in Busby et al. (1996) and that for SR spring/summer chinook in Mathews and Waples (1991) and is summarized in Myers et al. (1998). Recent counts of upstream migration of both species, done at Lower Granite Dam, show at least some short-term improvement in the levels of adults returning to spawn. The Grande Ronde River, to which Catherine Creek is a tributary, is one of five principal subbasins in the Snake River drainage that contributes to salmon and steelhead production. SR spring/summer chinook are not known to use Mill Creek or Little Creek. These streams are tributaries of Catherine Creek where SR spring/summer chinook presence has been documented (Pers. comm. Tim Walters, ODFW, August 10, 2001), therefore, EFH is addressed in this Opinion.

Critical habitat for SR spring/summer chinook was designated on December 28, 1993 (58 FR 68543). Critical habitat for SR steelhead was designated on February 16, 2000 (65 FR7764).

Critical habitat for SR salmon and steelhead encompasses the major Columbia River tributaries known to support this ESU, including the Salmon, Grande Ronde, Imnaha, Deschutes, John Day, Klickitat, Umatilla, Walla Walla, and Yakima Rivers, as well as the Columbia River and estuary. Critical habitat consists of all waterways below long-standing (more than 100 years duration) naturally-impassable barriers, and therefore includes the Little Creek and Mill Creek project areas. The riparian zone adjacent to these waterways is also considered critical habitat. This zone is defined as the area that provides the following functions: Shade, sediment, nutrient/chemical regulation, stream bank stability, and input of large woody debris/organic matter.

Spring/summer chinook are not known to use Mill Creek or Little Creek. Presence/absence surveys have not detected their presence. An exception may be that limited winter rearing may occur near the mouths of the streams. This use has not been documented (Pers. comm. Tim Walters, ODFW, August 10, 2001).

Adult steelhead may pass through Mill Creek and Little Creek from January through the middle of May. Juveniles may be found in Mill Creek near the project site, during cooler water periods from October through June. The lower reaches of Mill Creek experience low summer flows frequently resulting in high water temperatures, approaching 80 degrees Fahrenheit. Juveniles may use cool water refugia, where it exists, during warm water periods in the lower reaches.

Essential features of the adult spawning, juvenile rearing, and adult migratory habitat for the SR steelhead and chinook are: 1) Substrate, 2) water quality, 3) water quantity, 4) water temperature, 5) water velocity, 6) cover/shelter, 7) food, 8) riparian vegetation, 9) space, and 10) safe passage conditions. The essential features that the project may affect are substrate, water quality, water temperature, water velocity, cover/shelter, food, and riparian vegetation.

1.4 Evaluating Proposed Actions

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). NMFS must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitat. This analysis involves the initial steps of: 1) Defining the biological requirements and current status of the listed species; and 2) evaluating the relevance of the environmental baseline to the species' current status.

Subsequently, NMFS evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NMFS must consider the estimated level of mortality attributable to: 1) Collective effects of the proposed or continuing action; 2) the environmental baseline; and 3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmonid's life stages that occur beyond the action area. If NMFS finds that the action is likely to jeopardize, NMFS must identify reasonable and prudent alternatives for the action.

Furthermore, NMFS evaluates whether the action, directly or indirectly, is likely to destroy or adversely modify the listed species' designated critical habitat. NMFS must determine whether habitat modifications appreciably diminish the value of critical habitat for both survival and recovery of the listed species. The NMFS identifies those effects of the action that impair the function of any essential element of critical habitat. The NMFS then considers whether such impairment appreciably diminishes the habitat's value for the species' survival and recovery. If NMFS concludes that the proposed action will destroy or adversely modify critical habitat it must identify any reasonable and prudent alternatives available.

For the proposed action, NMFS' analysis considers direct or indirect mortality of fish attributable to the action. NMFS' critical habitat analysis considers the extent to which the proposed action impairs the function of essential elements necessary for juvenile and adult migration, spawning, and rearing of the SR spring/summer chinook, and steelhead under the existing environmental baseline.

1.4.1. Biological Requirements

The first step the NMFS uses for applying the ESA section 7(a)(2) to listed salmon and steelhead is to define the species' biological requirements that are most relevant to each consultation. NMFS also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NMFS starts with the determinations made in its decision to list SR salmon and steelhead for ESA protection, and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for SR spring/summer chinook and SR steelhead to survive and recover to naturally reproducing population levels at which time protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment. For this consultation, the biological requirements are improved habitat characteristics that function to support successful adult and juvenile migration, spawning and rearing.

The current status of SR spring/summer chinook salmon ESU has improved somewhat since being listed as threatened in 1992. In 1994 the species was proposed for listing as endangered due to very low numbers of adults observed at Lower Granite Dam on the lower SR. However, an improvement in the adult return levels as seen in 1997 promoted the withdrawal of the proposed listing in 1998. Recent returns show continuing improvements in adult returns, at least for some portions of the ESU. The counts at Lower Granite for spring/summer chinook were 14,320 in 1998, 6,556 in 1999, 37,755 in 2000, and 18,972 in 2001 (<http://www.nwp.usace.army.mil/op/fishdata/lwrgrant.htm>). Lower Granite Dam is located at river mile 107.5 on the main stem of the Snake River about 70 miles below (downstream of) the confluence with the Grande Ronde River with the Snake River.

SR spring/summer chinook use relatively small, higher elevation streams for spawning and early juvenile rearing. They migrate swiftly to sea as yearling smolts. The returning spring run chinook reach the Snake River in April, whereas returning summer run adult chinook reach the Snake River in July. Peak spawning for both spring and summer chinook is in the fall (mid August through September). The Grande Ronde River Basin contains spring and summer runs. Populations from this ESU migrate to the ocean as yearlings, mature at ages 4 and 5, and are rarely taken in ocean fisheries. High water temperatures and low water levels prevent Mill Creek and Little Creek from being suitable chinook spawning habitat.

Adult steelhead enter freshwater from May to August, and begin to move into the Grande Ronde system in February. Spawning occurs from March through May. After spawning, adult steelhead individuals of this population die, so they are not present in the system after around June. Juveniles are present all year, but are likely to move to cool water refugias during the warm summer months. Hatchery fish are widespread in the SR steelhead ESU.

NMFS concluded that the SR steelhead are not presently in danger of extinction, but likely to become extinct in the foreseeable future (NMFS 1996). This is primarily due to the declining abundance of natural runs. As with chinook salmon, the most significant barriers to steelhead presence in the Grande Ronde River basin are the many dams along the Columbia and Snake Rivers that greatly inhibit migration. Possible genetic introgression from hatchery stocks is another threat. NMFS is also concerned about the degradation of freshwater habitats within the region, especially the impact of grazing, irrigation diversions, and hydroelectric dams on steelhead. However, the evaluation of threats to SR steelhead is clouded by uncertainty around population sizes, degree of interaction between hatchery and natural stock, and relationships between anadromous and resident forms of steelhead.

1.4.2. Environmental Baseline

The current range-wide status of the identified ESUs may be found in Busby et al. (1996) and Myers et al. (1998). The identified action will occur within the range of SR steelhead and SR spring/summer chinook. The defined action area is the area that is directly and indirectly affected by the proposed action. The direct effects occur at the project site and may extend upstream or downstream based on the potential for impairing fish passage, hydraulics, sediment and pollutant discharge, and the extent of riparian habitat modifications. Indirect affects may occur throughout the watershed, where actions described in this Opinion lead to additional activities, or affect ecological functions, contributing to stream degradation. As such, the action area for the proposed activities include the immediate portions of the watershed containing the project and those areas upstream and downstream that may reasonably be affected, temporarily or in the long term. For the purposes of this Opinion, the action area is defined as the streambed and riparian habitat of Mill and Little Creeks, 100 feet upstream from each bridge site, and 200 feet downstream.

The project is within the Grande Ronde River basin. The watershed covers about 328 square miles, most of which is private agricultural lands; the upper reaches are located within the Wallowa-Whitman National Forest. Catherine Creek, which Mill Creek and Little Creek are both tributaries to, flows out of the west side of the Wallowa Mountains, through the city of Union, and then into the Grande Ronde River. About 140 miles down from this confluence, the Grande Ronde River enters the Snake River near the northeastern Oregon/Idaho border.

The eastern portion of the Snake River Basin flows out of the granitic geological unit known as the Idaho Batholith, while the western Snake River Basin drains sedimentary and volcanic soils of the Blue Mountains complex. The project is within the Blue Mountains Province, characterized by coniferous forests and grass/steppe vegetation. The riparian corridor within the project area includes cottonwood trees, willows, box elder, red-osier dogwood, wild rose, bedstraw, goat's beard, orchard grass, cheatgrass, and other non-native grasses.

Based on the best available information on the current status of SR steelhead range-wide; the population status, trends, and genetics; and the poor environmental baseline conditions within the action area, NMFS concludes that the biological requirements of the identified ESU within the action area are not currently being met. Numbers of steelhead are substantially below historic numbers. Recovery trends show no clear pattern due to lack of long-term data. Degraded freshwater habitat conditions, which include the effects of agricultural and residential use, have contributed to the decline. The NMFS Matrix of Pathways and Indicators (MPI) was used to assess the current condition of various steelhead and salmon habitat parameters. Use of the MPI identified the following habitat indicators as either at risk or not properly functioning within the action area: Water temperatures, turbidity/sediment, substrate, large woody debris, pool frequency and quality, off channel habitat, refugias, streambank condition, flood plain connectivity, peak/base flows, drainage network increase, and disturbance history and regime. Actions that do not maintain or restore properly functioning aquatic habitat conditions have the potential to jeopardize the continued existence of SR steelhead.

1.5 Analysis of Effects

1.5.1 Effects of Proposed Action

The effects determination in this Opinion was made using a method for evaluating current aquatic conditions, the environmental baseline, and predicting effects of actions on them. This process is described in the document, *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The effects of proposed actions are expressed in terms of the expected effect (restore, maintain, or degrade) on aquatic habitat factors in the project area.

The construction activity has the potential to directly harm juvenile fish or disturb rearing juveniles. In the short term, a temporary increase of sediment and turbidity and disturbance of riparian and instream habitat is expected. Increases in sediment and turbidity could reduce light

penetration and inhibit primary production, abrade and clog fish gills, prevent feeding by sight feeders, stop migration, and cause any fish in the area to avoid the disturbed reaches of the creek. Placement of riprap along the embankment may alter fish rearing and migration behavior. Increased sedimentation may result in minor siltation of downstream spawning gravels. There is a potential for changes in channel conditions and dynamics following the placement of riprap. Areas of the stream bank disturbed during construction will be revegetated, which will eventually restore function in those areas. The effects of these activities on SR steelhead and SR spring/summer chinook and aquatic habitat factors will be limited by implementing construction methods and approaches that are included in project design intended to avoid or minimize impacts. All construction work will be done within the ODFW-approved inwater work period.

In the long term, the bridges will provide natural bottom conditions for optimum fish passage, will pass well in excess of 50 year flood events, and will provide optimum channel configuration for debris and bedload movement. Cross sectional area to accommodate peak flows will increase current capacities by approximately 50% at each of the project sites. Consequently, NMFS does not expect that the cumulative effects of this action will diminish the long-term value of the habitat for survival of SR steelhead and SR spring/summer chinook.

1.5.2 Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." The action area is defined as the streambed and riparian habitat throughout the action area. The action area extends 100 feet upstream of each individual bridge/crossing project site, and 200 feet downstream. The project actions consist of replacing a bridge, and are detailed in the project description section above. NMFS is not aware of any significant change in non-Federal activities that are reasonably certain to occur within the action area. NMFS assumes that future private and State actions will continue at similar intensities as in recent years.

1.6 Conclusion

NMFS has determined based on the available information, that the proposed action is expected to cause no further degradation of stream habitat conditions within the action area over the long term. As such, the proposed action covered in this Opinion is not likely to jeopardize the continued existence of SR spring/summer chinook salmon and SR steelhead. NMFS used the best available scientific and commercial data to apply its jeopardy analysis, when analyzing the effects of the proposed action on the biological requirements of the species relative to the environmental baseline, together with cumulative effects. NMFS applied its evaluation methodology (NMFS 1996) to the proposed action and found that it would cause minor, short-term adverse degradation of anadromous salmonid habitat due to sediment impacts, in-water construction, and habitat loss. These effects will be minimized through the implementation of proposed planting and improved bridge design. Because currently existing aquatic habitat

conditions will be maintained or improved, there is no adverse modification or destruction of critical habitat. Direct mortality of juvenile steelhead and/or chinook may occur during the in-water work period of project activities, but is expected at only minor levels that would not jeopardize the listed species.

1.7 Conservation Recommendations

Section 7 (a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of proposed actions on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information. The NMFS has no additional conservation recommendations regarding the action addressed in this Opinion.

1.8 Reinitiation of Consultation

Consultation must be reinitiated if: 1) The amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; 2) new information reveals effects of the action may affect listed species in a way not previously considered; 3) the action is modified in a way that causes an effect on listed species that was not previously considered; or, 4) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16). To reinitiate consultation, BPA must contact the Habitat Conservation Division (Oregon Habitat Branch) of NMFS, and refer to OSB2001-0198.

2. INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement. An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

2.1 Amount or Extent of Take

The NMFS anticipates that the action covered by this Opinion has more than a negligible likelihood of resulting in incidental take of SR chinook salmon and SR steelhead because of detrimental effects from increased sediment levels (non-lethal) and the potential for incidental take during in-water work (lethal and non-lethal). Effects of actions such as these are not expected to have a long-term effects on chinook salmon and steelhead habitat or population levels. Based on the information in the BA, NMFS anticipates that a minor amount of incidental take (up to ten SR steelhead and/or spring/ summer chinook) could occur as a result of the actions covered by this Opinion. If this threshold is exceeded, consultation must be reinitiated. The extent of the take is limited to within the area of project disturbance, extending 100 feet upstream and 200 feet downstream of the project area.

2.2 Effect of Take

In this Opinion, the NMFS has determined that the level of anticipated take is not likely to jeopardize SR steelhead, SR spring/summer chinook, or to destroy or adversely modify designated critical habitat when the reasonable and prudent measures are implemented.

2.3 Reasonable and Prudent Measures

The NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimize take of SR steelhead and SR spring/summer chinook resulting from the action covered in this Opinion. The BPA shall:

1. Minimize the likelihood of incidental take resulting from inwater work required to complete the project addressed in this Opinion.
2. Minimize the amount and extent of incidental take from construction activities in or near watercourses by ensuring that an effective spill prevention, containment, and control plan is developed, implemented, and maintained to avoid or minimize point-source pollution both into and within watercourses over the short term and the long term.
3. Minimize the likelihood of incidental take and impacts to critical habitat resulting from riparian area disturbances including removal of vegetation and disturbance of soils and sediments.
4. Complete a comprehensive monitoring and reporting program to ensure implementation of requirements found in this Opinion are implemented and effective.

2.4 Terms and Conditions

In order to be exempt from the prohibitions of section 7 of the ESA, the applicant must comply with the following terms and conditions, which will implement the reasonable and prudent measures described above. These terms and conditions shall be incorporated into construction contracts and subcontracts to ensure that the work is carried out in the manner prescribed. Implementation of the terms and conditions within this Opinion will further reduce the risk of impacts to fish habitat. These terms and conditions are non-discretionary.

1. To implement Reasonable and Prudent Measure #1 above, the BPA shall ensure that:
 - a. Project Design. The following overall project design conditions are met.
 - i. Minimum area. Construction impacts will be confined to the minimum area necessary to complete the project. As much work as possible proposed for below the ordinary high water line will be completed during low flow periods.
 - ii. Inwater work. All work within the active channel will be completed within the ODFW approved inwater work period for this area, July 1 through October 15. Extensions of the in-water work period, including those for work outside the wetted perimeter or the stream but below the ordinary high water mark must be approved by biologists from NMFS.
2. To implement Reasonable and Prudent Measure #2 above, the BPA shall ensure that:
 - a. Isolation of inwater work area. The work area will be well isolated from the active flowing stream to minimize the potential for sediment delivery. Sediment levels will be monitored to ensure compliance with state water quality standards. All project operations, except efforts to minimize sedimentation, will cease if sediment levels exceed state water quality standards.
 - b. Pollution and erosion control plan. A Pollution and Erosion Control Plan (PECP) will be developed to prevent point-source pollution related to construction operations. The PECP will contain the pertinent elements listed below and meet requirements of all applicable laws and regulations:
 - i. Methods that will be used to prevent erosion and sedimentation associated with access roads, stream crossings, construction sites, equipment and material storage sites, fueling operations and staging areas.
 - ii. Methods that will be used to confine and remove and dispose of excess concrete, cement, and other mortars or bonding agents, including measures for washout facilities.
 - iii. A description of the hazardous products or materials that will be used, including inventory, storage, handling, and monitoring.
 - iv. Measures that will be taken to prevent construction debris from falling into any aquatic habitat. Any material that falls into a stream during construction operations will be removed in a manner that has a minimum impact on the streambed and water quality.

- v. Equipment that is used for work shall be cleaned prior to entering the job site. External oil and grease shall be removed, along with dirt and mud. Untreated wash and rinse water will not be discharged into construction area without adequate treatment. Areas for fuel storage and servicing of construction equipment and vehicles will be located at least 300 feet away from any body of water.
 - vi. The contractor shall develop and implement a site-specific spill prevention, containment, and control plan (SPCCP) that includes notification procedures, and is responsible for containment and removal of any toxins released. The contractor will be monitored by the BPA to ensure compliance with the SPCCP.
 - vii. The person identified as the Erosion and Pollutant Control Manager (EPCM) shall also be responsible for the management of the contractors' SPCCP. In the event of a hazardous materials or petrochemicals spill, the EPCM shall be responsible for:
 - (1) Taking immediate action shall be taken to recover toxic materials from further impacting aquatic or riparian resources.
 - (2) Documenting a detailed description of the quantity, type, source, reason for the spill, and actions taken to recover materials.
 - (3) Notifying necessary state officials.
 - (4) All refueling of equipment will take place 300 feet from any body of water and auxiliary fuel tanks will not be stored on bridges, roads or within the two-year flood plain.
 - (5) All machinery will be inspected for leaks prior to on-site use.
3. To implement reasonable and prudent measure #3, the BPA shall ensure that:
- a. Construction activities will be done in a way which minimizes disturbance of existing riparian vegetation. In all areas that require removal or involve mortality of riparian vegetation, re-seeding and/or replanting of vegetation with native species will occur.
 - b. Existing vegetation conditions shall be monitored.
 - c. Immediately implement revegetation procedures to replace any functional riparian components dying because of construction. Only native vegetation will be replanted. Soil erosion control fabric will be used in conjunction with seeding to reduce sedimentation releases for the disturbed areas.
 - d. The success of planting within, and adjacent to, the construction area is monitored. The BPA will supply a monitoring report to the NMFS that shall include photos of the planting in the project area. The monitoring of any new planting should be done one year following construction and again at the third and the fifth year.
 - e. Failed planting will be replaced yearly, for a period of five years.

4. To implement reasonable and prudent measure #4, the BPA and/or its contractor(s) will:
 - a. Within 1 year of completing the project, the BPA will submit a monitoring report to NMFS describing the BPAs' success in meeting these terms and conditions. Monitoring reports should be submitted to:

National Marine Fisheries Service
Oregon Habitat Branch
Attn: OSB2001-0198
525 NE Oregon Street, Suite 500
Portland, Oregon 97232-2778

NOTICE. If a dead, injured, or sick endangered or threatened species specimen is located, initial notification must be made to the National Marine Fishery Service Law Enforcement Office, located at Vancouver Field Office, 600 Maritime, Suite 130, Vancouver, Washington 98661; phone: (360) 418-4246. Care should be taken in handling sick or injured specimens to ensure effective treatment and care or the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered and threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

3. MAGNUSON-STEVENSON ACT

3.1 Background

The objective of the Essential Fish Habitat (EFH) consultation is to determine whether the proposed action may adversely affect designated EFH for relevant species, and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH resulting from the proposed action.

3.2 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NMFS on activities that may adversely affect EFH.

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of essential fish habitat: Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where

appropriate; substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities; necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species' full life cycle (50CFR600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;
- NMFS shall provide conservation recommendations for any Federal or State activity that may adversely affect EFH;
- Federal agencies shall within 30 days after receiving conservation recommendations from NMFS provide a detailed response in writing to NMFS regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NMFS, the Federal agency shall explain its reasons for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and up slope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

3.3 Identification of EFH

The Pacific Fisheries Management Council (PFMC) has designated EFH for federally-managed fisheries within the waters of Washington, Oregon, and California. The designated EFH for groundfish and coastal pelagic species encompasses all waters from the mean high water line, and upriver extent of saltwater intrusion in river mouths, along the coasts of Washington, Oregon and California, seaward to the boundary of the U.S. exclusive economic zone (370.4 km)(PFMC 1998a, 1998b). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally-impassable barriers (i.e., natural waterfalls in existence for several hundred years)(PFMC 1999). In estuaries and marine areas, designated salmon EFH extends from the near shore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (370.4 km) offshore of Washington, Oregon, and California north of Point Conception to the Canadian border.

Detailed descriptions and identifications of EFH for the groundfish species are found in the Final Environmental Assessment/Regulatory Impact Review for Amendment 11 to The Pacific Coast Groundfish Management Plan (PFMC 1998a) and the NMFS Essential Fish Habitat for West Coast Groundfish Appendix (Casillas *et al.* 1998). Detailed descriptions and identifications of EFH for the coastal pelagic species are found in Amendment 8 to the Coastal Pelagic Species Fishery Management Plan (PFMC 1998b). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (PFMC 1999). Assessment of the potential adverse effects to these species' EFH from the proposed action is based on this information.

The PFMC has designated EFH for three species of Pacific salmon: chinook (*Oncorhynchus tshawytscha*); coho (*O. kisutch*); and Puget Sound pink salmon (*O. gorbuscha*) (PFMC 1999). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally- impassable barriers (i.e., natural waterfalls in existence for several hundred years). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (PFMC 1999). Assessment of potential adverse effects to these species' EFH from the proposed action is based on this information.

3.4 Proposed Actions

The proposed actions are detailed above in section 1.1. The action area includes sites on Little Creek and Mill Creek. This area has been designated as EFH for various life stages of SR spring/summer chinook.

3.5 Effects of Proposed Action

As described in detail in ESA portion of this consultation, the proposed activities may result in detrimental short-term adverse effects to a variety of habitat parameters.

3.6 Conclusion

NMFS believes that the proposed action may adversely affect the EFH for SR spring/summer run chinook salmon.

3.7 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Act, NMFS is required to provide EFH conservation recommendations for any Federal or state agency action that would adversely affect EFH. The conservation measures proposed for the project by the BPA, all of the Reasonable and Prudent Measures and the Terms and Conditions contained in Sections 2.2 and

2.3 are applicable to salmon EFH. Therefore, NMFS incorporates each of those measures here as EFH recommendations.

3.8 Statutory Response Requirement

Please note that the Magnuson-Stevens Act (section 305(b)) and 50 CFR 600.920(j) requires the Federal agency to provide a written response to NMFS after receiving EFH conservation recommendations within 30 days of its receipt of this letter. This response must include a description of measures proposed by the agency to avoid, minimize, mitigate or offset the adverse impacts of the activity on EFH. If the response is inconsistent with a conservation recommendation from NMFS, the agency must explain its reasons for not following the recommendation.

3.9 Consultation Renewal

The BPA must reinitiate EFH consultation with NMFS if either action is substantially revised or new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920).

4. LITERATURE CITED

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this Opinion.

Busby, P., S. Grabowski, R. Iwamoto, C. Mahnken, G. Matthews, M. Schiewe, T. Wainwright, R. Waples, J. Williams, C. Wingert, and R. Reisenbichler. 1995. Review of the status of steelhead (*Oncorhynchus mykiss*) from Washington, Idaho, Oregon, and California under the U.S. Endangered Species Act. 102 p. plus 3 appendices.

Busby, P., T. Wainwright, G.J. Bryant, L.J. Lierheimer, R.S. Waples, and I.V. Lagomarsino. 1996. Status review of west coast steelhead from Washington, Idaho, Oregon, and California.

DEQ 1999. DEQ's 1998 303d List of Water Quality Limited Streams & Oregon's Criteria Used for Listing Waterbodies. Oregon Department of Environmental Quality (DEQ), Portland, Or 1999. (www.deq.state.or.us/wq/303dlist/303dpage.htm).

Matthews, G.M., and R.S. Waples, 1991. Status review for SR Spring and Summer Chinook Salmon. US. Department of Commerce, NOAA Technical Memo. NMFS

Myers, J.M., R.G. Kope, G.J. Bryant, D. Teel, L.J. Lierheimer, T.C. Wainwright, W.S. Grant, F.W. Waknitz, K. Neely, S.T. Lindley, and R.S. Waples, 1998. Status Review of Chinook

Salmon from Washington, Idaho, Oregon, and California. U.S. Department of Commerce, NOAA Technical Memo. NMFS-NWFWC-35, 443 p.

NMFS 1996. Making Endangered Species Act determinations of effect for individual and grouped actions at the watershed scale. Habitat Conservation Program, Portland, Oregon, 32 p.

PFMC (Pacific Fishery Management Council). 1999. Amendment 14 to the Pacific Coast Salmon Plan. Appendix A: Description and Identification of Essential Fish Habitat, Adverse Impacts and Recommended Conservation Measures for Salmon. Portland, Oregon.